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The Impact of Information and Communication Technology (ICT) in Nigerian University Libraries

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Introduction

With the invention of Information and Communication Technology, libraries now use various types of technologies to aid the services they render. Everyday new technological advances affect the way information is handled in libraries and information centers. The impacts of new technologies are felt by libraries in every aspect. Computing technology, communication technology and mass storage technology are some of the areas of continuous development that reshape the way that libraries access, retrieve, store, manipulate and disseminate information to users. The academic library has been from its inception an integral part of institutions of higher learning, rather than an appendix or adjunct.

Oyedun (2007) defines academic libraries as those libraries that are mainly found in tertiary institutions, they are established to support learning, teaching and research processes. Over the past twenty seven years, academic libraries have been affected by changes in information and communication technology. The rate of changes is still accelerating in this area. The introduction of various information technology (ICT) trends has lead to reorganization, change in work patterns, and demand for new skills, job retraining and reclassification positions. Technological advancement of the past twenty five years, such as the electronic database, online services, CD-ROMs and introduction of internet has radically transformed access to information. Rana (2009) opines that ICT holds the key to the success of modernizing information services. Applications of ICT are numerous but mainly it is used in converting the existing paper-print records in the entire process of storage, retrieval and dissemination.

ICT has impacted on every sphere of academic library activity especially in the form of the library collection development strategies, library building and consortia. ICT presents an opportunity to provide value-added information services and access to a wide variety of digital based information resources to their clients. Furthermore, academic libraries are also using modern ICTs to automate their core

functions, implement efficient and effective library cooperation and resource sharing networks, implement management information systems, develop institutional repositories of digital local contents, and digital libraries: and initiate ICT based capacity building programmes for library users.

Information and Communication Technology (ICT) has brought unprecedented changes and transformation to academic library and information services, conventional LIS such as OPAC, users services, reference services, bibliographic services, current awareness services, Document delivery, interlibrary loan, Audio visual services and customer relations can be provided more efficiently and effectively using ICT, as they offer convenient time, place, cost effectiveness, faster and most-up-to-date dissemination and end users involvement in the library and information services process. The impact of ICT characterized on information services by changes in format, contents and method of production and contents and method of production and delivery of information products. Emergence of internet as the largest repository of information and knowledge, changed role of library and information science professionals from intermediary to facilitator, new tools for dissemination of information and shift from physical to virtual services environment and extinction of some conventional information services and emergence of new and innovational web based.

Statement of the Problem

Considering the enormous benefits that are experienced in the impact of ICT in Nigerian University Libraries, the Nigerian academic libraries still experience some obstacles or hindrances in the effective and efficient use of the ICT resources in the library. Today, ICT acquisition and implementation is facing a lot of problems. This research work is being conducted to expose some of the inhibiting factors that are hindering the impact of ICT on Nigerian academic Libraries. Among the militating factors hindering the impact of ICT on Nigerian academic Libraries are a lot of capital investment to buy hardwares, softwares and standby generators for the library. Lack of search skills, automation at infancy level, epileptic power supply, and technical know - how are some of the problem encountered by the academic libraries.

Objectives of the Study

1. To ascertain the level of computerization/automation of academic Libraries.
2. To determine the usefulness of ICT resources in academic libraries.
3. To determine the efficiency and effectiveness of ICT in academic library.
4. To determine how skillful and knowledgeable the staff are in the use of ICT resources.
5. To determine the challenges associated with the application of ICT in Nigerian academic libraries.

Research Questions

1. To what extent has information and communication technology been employed in Nigerian university libraries?
2. What is the usefulness of information and communication technology in Nigerian academic libraries?
3. How efficient and effective is the use of ICT resources in Academic Libraries
4. Do the staff of the academic Libraries have the required knowledge and skills in

using ICT resources?

5. What are the factors militating against the application of ICT in academic libraries?

Purpose of the Study

The purpose of the study is to ascertain the impact of ICT on Nigerian academic libraries. The research work highlights the advantages or merit associated with ICT on academic libraries in Nigeria.

Scope of the Study

This research work is on the impact of ICT on Nigerian University Libraries using John Harris Library (Benin City) and Benson Idahosa University Library (BIU) as a case study

Significance of the Study

- i. This study is expected to provide a basis for comprehensive information on information and communication technology procurement and application in Nigeria University Library.
- ii. The study will established the existing gaps in the adoption of information and communication technology in the operations of academic library in achieving their statutory functions.
- iii. The output of this study will serve as a blueprint for libraries, information managers/information scientists, researchers, lecturers, students, and teachers to chart the right course of action for the use of information and communication technology in furthering education through policy formulation and implementation.

History of the Benson Idahosa University Library

Benson Idahosa University library occupies a three-storey circular building situated apposite the central administration building the library is provided with ceiling fan and the first floor is rugged wall-to-wall to enhance maximum comfort for serious academic work.

The library serves as the hub around which the academic activities in the university revolve. The library commended in 2002 proper after the appropriate endorsement of the Nigerian Universities commission.

The library has a stock of over 43,000 volumes of textbooks and reference books. It subscribes to about fifty currently Journal titles. There are also back files of Journals for some of the current files. The books acquired and shelved in the Library cover virtually all the courses offered at both undergraduate and post graduate levels in the university.

History of John Harris Library

The John Harris library began with the promulgation of the institute of technology edict in 1970. Clear provision had been made for the need of a library and the provision of textbook with the commencement of the first academic year which was scheduled to take off in October, 1970. The Late Mrs. P. Harris, wife of the first university librarian who was then a consultant to the Federal Government of Nigeria was secured to draft a programme for the university planning committee.

Professor John Harris was appointed the first institute's librarian. While the temporary building was yet to be completed two classrooms were provided for the assembly of furniture and equipment, preliminary training of staff and books. The library was officially opened during the foundation day of the institute which harked its official opening. The University Library as a center of study performs a support function i.e. to support learning, teaching and research process in the university. The library can only play this pivotal role by stock building-acquiring, processing, organizing and making available the needed materials. This requires the principle of management in providing the expertise for planning, organized and welding human materials and human resources for the attainment of desired

Methodology

Research Design

The choice of the survey as the research design for the project was necessitated by the nature of the study. This research is a survey research that gathered data from members of the selected population with the aid of the Questionnaire in order to determine the current status of the issue under study from the respective institutions.

Population of the Study and Sample

The population of this study covers all the professional and paraprofessional staff of the two selected academic libraries.

Table 2.1 Population of Study

S/N	Libraries	Staff		Total
		Professional	Para-professional	
1.	John Harris Library	19	20	39
2.	Benison Idahosa University Library	25	24	10
	Total			49

Table 2.1 shows staff population in the two university libraries used for the study. As shown in the table 3.1 John Harris Library (UNIBEN) has 19 professional and 20 Para-professional and while Benson Idahosa University has 6 professional and 4 paraprofessional staff. In all these there are 49 professional and paraprofessional staff in the two selected university libraries. Since the number of the population is small (that is, 49) the whole population was used for this study rather than a sample. Put differently, the sample is 100% of the population.

Instrument

The main research instrument used for the research was the Questionnaire designed by the researcher. The choice of this instrument was prompted by its reliability and validity of the answers. This is so because the interaction between the researcher and the respondents, which could bias the responses to the questions in the questionnaire, is minimal.

Apart from the above advantage other advantage of the Questionnaire as a research instrument as stated by Ifidon and Ifidon (2007) include; (i) Ability to gather information for gigantic investigations (ii) Its usefulness for obtaining opinion of judgments; and for surveying attitudes; (iii) practicability of using it to gather information by correspondence (iv) Applicability to the large assemblage, of people (vi) provision of more efficient data collection because many subjects can be tested at the same time (vii) Completion of the questionnaire at the respondents convenience (viii) Reactivity and social desirability may be reduced because of completing a questionnaire anonymously can be much less threatening, (ix) Low cost of data gathering (x) Ease of collections and analysis of data. (xi) Elimination of research bias and (xii) possibility of mailing it.

The above advantage amongst other factors necessitated the use of questionnaire used in this research was divided into various sections, that is section A-F.

Section A elicits information relating to the Bio-data or personal data of the professional and Para-professional staff.

Section B elicits information dealing with the level of computerization/ automation.

Section C has information dealing with the usefulness of ICT resources.

Section D contained item dealing with the effectiveness of ICT.

Section E elicits information relating to the skills in using ICT resources.

Section F contained the factors militating against the application of ICT in Nigeria University Library.

Method of Data Calculation

49 copies of Questionnaire (100% of the population) were administered to the Professional and the Para-professional library staff of these two selected University Library in Edo State. That is, John Harris Library (UNIBEN) Benin City, and Benson Idahosa University Library (BIU) Benin-City. The researchers personally administered the copies of the Questionnaires to the respondents. Items which needed clarification were explained to the respondents. To ensure that the respondents do not have ready answers and to avoid bias responses, the respondents were not pre-informed of the visit by the researchers. Out of the 49 copies of the Questionnaire administered, 48 (97.9%) were returned to the researchers at the end.

Method of Data Analysis

The method of data analysis used in this project was simplest form of organizing data, it aids understating and it series. The useful purpose of helping the researcher to see the similarities and relationship of his data. Equally, converting data to percentage responses enables the researcher to compare sub group of unequal size meaningfully. (Ifidon and Ifidon, 2007).

In this research the raw figures were converted to percentages and tabulated. The responses were analyzed according to their relevance to the research questions.

Data Analysis, Presentation of Results, and Discussion

The focus of this research is on the impact of ICT on Nigerian University libraries. In this chapter the data collected were presented, analyzed, interpreted and discussed.

To provide the data and institutional setting are John Harris University Library

(UNIBEN) and Benson Idohosa University Library (BIU) both are located in Benin-city, Edo State of Nigeria.

Data Analysis

A total of 49 copies of the Questionnaire were administered to professional and paraprofessional staff in the two selected university libraries. Forty-eight (97.9%) copies of the Questionnaires administered were returned; it was into various sections A-F.

Table 1: Distribution of questionnaires to John Harris Library and Benson idahosa university library

S/N	Cadre of staff	No of respondents	Percentage
1	Professional staff	25	51%
2	Para-Professional staff	24	49%
	Total	49	100%

Table1 shows staff population in the two university libraries used as study.

Table 2: Number of questionnaires retrieved from both University Libraries

S/N	Retrieved	No of respondents	Percentage
1	Professional	24	50
2	Para- professional	24	50
	Total	48	100

A total of forty nine copies of the questionnaire were administered to the respondents of both university libraries which consist of professional and Para-professional staff. Out of the 49 questionnaire, 48 were retrievable and was properly, filled that is to say (97.9%) of the questionnaire were eventually completed and returned. See tables 1 and 2.

Table 3: Gender analysis of both university Libraries

S/N	Gender	No of Respondents	Percentage
1	Male	19	39.6%
2	Female	29	60.4%
	Total	48	100%

The table above shows that out of the total number of respondents from both University libraries, 29 (60.4%) were female while 19 (39.6%) were male. That is to say that the female staff forms the majority of the staff in both libraries understudy.

Table 4: Distribution of respondents by Age

S/N	Age range	No of respondents	Percentage (%)
1	25 – 35 years	12	25
2	36 – 45 years	22	46.0
3	46 – 55 years	10	21.0
4	56 and above	4	8.0
	Total	48	100

From the above Table 4, in view of the response of the respondents it was indicated that most of the respondents are 36-45 years representing 22 (46.0%) which form the majority of the respondents working in both university, followed by 25 – 35 years representing 12 (25%) respondents; while 46 – 55 years representing 10 (21.0%) and 56 and above representing 4 (8.0%) respectively.

Table 5: Educational Qualification of respondents

S/N	Qualification	No of Respondents	Percentage
1	MA/MSC/MLS	9	19.0%
2	BSC/BLS/BA	15	31.0%
3	OND/NCE/DIP/ND	24	50.0%
4	Ph.D	-	-
	TOTAL	48	100%

24 (50%) respondents had OND/NCE/Diploma/ ND, followed by 15 (31.0%) respondents that has BSC/BLS/BA and 9 respondent representing 19.0% had master degrees in Art, Science or Library and information science. None of the respondents had PhD

Table 6: Distribution of respondents based on the number of staff in both university libraries

S/N	Option	No of Respondents	Percentage
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1	Professional staff	24	50%
2	Para-professional staff	24	50%
	Total	48	100%

Table 6: shows that both the professional staff and the Para-professional staff of both University Libraries arrived at equilibrium based on the responses of the respondents.

Table 7: Level of computerization

S/N	Option	No of Respondents	Percentage
1	Yes	48	100%
2	No	-	-
	Total	48	100%

In regards to the response of the respondents, it shows that both university libraries under study are computerized/automated. Because all the respondents responses was yes to the question posed by the researcher.

Table 8: Type of software

S/N	Application package	No of respondents	Percentage
1	SLAM	48	100%
2	TINLIB	-	-
3	GLAS	-	-
4	ERICA	-	-
5	CDS/ISIS	-	-
	TOTAL	48	100%

Table 8 shows that both university libraries under study apply SLAM (Strategic Library Automation Management) software in their library.

Table 9: Distribution of respondents based on the divisions of the library that are computerized

S/N	Division of the library	No of respondents	Percentage

1	Readers service division	24	50%
2	Technical service division	13	27.1%
3	Collection development division	11	22.9%
	Total	48	100%

Table 8 shows that only three divisions of both university libraries is computerized which are the readers services division, Technical service division and collection development division; while the research collection and system development division is not computerized.

Table 10: Usefulness of ICT resources in both libraries

S/N	ICT Resources	No of respondents	Percentage
1	Search engine	5	10.4%
2	Internet	7	14.6%
3	World Wide Web	8	17.0%
4	CD-ROM	18	38.0%
5	Online database	10	21.0%
	Total	48	100%

Table 10 shows that 18 (38.0%) of the respondents made use of CD-ROM compact-disk read only memory), 10 (21.0%) respondents use the online database; 8 respondents representing 17.0% use World Wide Web, while 7 respondents representing 14.6% use Internet and lastly only 5 (10.4%) respondents use search engine. From the table it can be deduced that the majority of the respondents use CD-ROM.

Table 11: Reason for the use of ICT resource

S/N	Option	No of respondents	Percentage
1	To acquire information	8	17.0%
2	To process information	9	19.0%
3	To store information	22	45.8%
4	To retrieve information	7	16.0%
5	To disseminate information	2	4.2%

Total	48	100%	

The table 10 above reveals that 22 (45.8) use ICT resources mainly for storing information; followed by 9 respondents representing 19.0%; 8(17.0%) respondents use ICT resources for acquisition of information; while 7 respondent representing 16.0% use ICT resources to retrieve information that has been stored for posterity purpose and (4.2%) use ICT resources for dissemination of information

Table 12: Distribution of respondents based on the effectiveness of ICT in both university libraries

S/N	Options	SA	A	D	SD
1	Automation has eased my library operation	28 58.3%	12 25%	5 10.4%	3 6.3%
2	Automation has show-down my library operation	2 4.1%	1 2.1%	15 31.3%	30 62.5%
3	Automation has aid my library in meeting users need quickly	22 45.8%	18 37.5%	4 8.3%	4 8.3%
4	Automation has speeded up the process of cataloguing and classification of library materials	32 66.7%	14 29.1%	1 2.1%	2 4.1%
5	Automation has helped to reduce anti-library crimes	11 22.9%	21 44.0%	9 18.6%	7 14.5%
6	With automation the library has been effective in selective dissemination of information	24 50%	13 27.1%	6 12.5%	5 10.4%
7	Automation has positively Impacted charging and discharging of books in my library	38 79.2%	10 20.8%	-	-
8	ICT enables most effective resource sharing	41 85.4%	5 10.4%	2 4.2%	
9	Online databale provide more up-to-date information in my library	23 47.9%	17 35.4%	3 6.3%	5 10.4%

Table 12 shows the frequency at which the effect and effectiveness of ICT has on academic libraries. The data reveals that 28 (58.3%) of the respondents strongly agree that automation has eased their library operation, 12 respondents representing 25% agreed that automation has eased their library operations, 5 (10.4%) of respondents disagree, only 3 (6.3%) of the respondents strongly disagree that automation has eased their library operation.

30 (62.5%) respondents which form the majority of the respondents strongly disagree that automation has slow down their library operation; followed by 15 (31.3%) respondents disagree; 2 (4.1%) strongly agree and 1 respondents representing 2.1% agree that automation has slow down their library operation. As shown in table 12 (No 16) those who affirm that automation has aided their library in meeting users need quickly are 22 (45.8%) respondents; while 18 (37.5%) agreed, and also 4 respondent representing 8.3% disagree, and 4 respondent representing 8.3% strongly disagree. 32 (66.7%) of the respondents strongly agree with the view that automation has speeded up the process of cataloguing and classification of library materials, which form the highest percentage, and also 14 respondents representing 29.1% agreed, while 2 (4.1) respondents strongly disagree and only 1 respondent representing 2.1% disagree.

21 (44.0%) of the respondents agree that automation has helped to reduce anti-library crimes, followed by 11 (22.9%) respondents which also strongly agreed, while 9 (18.6) of the respondent disagreed and 7 respondents representing 14.5% strongly agreed, while 9 (18.6) of the respondent disagreed and 7 respondents representing 14.5% strongly disagree. 24 (50%) respondents strongly affirm that with automation has been effective in selective dissemination of information; 13 (27.1%) respondents also agreed; while 6 (12.5%) respondents disagree and 5 respondents representing 10.4% strongly disagree with the view.

38 (79.2%) representing 10.4% strongly disagree with the view. 38 (79.2%) respondents strongly agree that automation has positively impacted charging and discharging of books in their library and 10 respondents representing 20.8% agreed.

41 (85.4%) respondents affirm that ICT enables most effective ways of resource sharing; followed by 5 respondents representing 10.4% agreed, and only 2 respondents representing 4.2% disagree.

In regards to the view which states that online database provide more up-to-date information in the library was strongly agreed by 23 (47.9%) respondents agree; Few respondents that is 3 (6.3%) disagree and 5 respondents representing 10.4% strongly disagree.

Table 13: Rating of ICT Skills

S/N	Level of ICT/Computer literacy skill	No of respondents	Percentage
1	Excellent	3	6.3%
2	Very good	-	-
3	Good	21	43.7%
4	Fair	19	39.6%
5	No skills	5	10.4%
	Total	48	100%

In table 12 (Question 23). Majority of the respondents who have good computer skills are 21 (43.7%), followed by those that have fair computer skills, they are 19 (39.6%) respondents; few of the respondent representing 5 (10.4%) had no skill at all. Only 3 respondents representing 6.3% had excellent computer skills.

Table 14: Distributions of respondents based on how ICT skills were acquired in both Universities Libraries

S/N	Means of Acquiring ICT Skills	No of respondents	Percentage
1	Staff-in-house training	3	6.3%
2	Self-study	10	20.8%
3	Formal training	18	37.5
4	Trial and Error	17	35.4
	Total	48	100%

The table 13 above shown that the majority of the respondents, i.e. 18 (37.5%) acquire ICT training skills via formal training; followed by 17 (35.4%) respondents which also acquired the skills via trial and error, while few i.e. 10 (20.8%) respondents acquired ICT skills via self - study and the least was 3 (6.3%) respondents that acquired the skills via staff-in-house training.

Table 15: Distribution of respondents based on the category of staff that would be needed to handle automation and assist users

S/N	Category of staff	No of respondents	Percentage
1	Staff trained in ICT	12	25%
2	Staff trained in librarianship P/ICT	28	58.
3	Staff in various profession	8	16.7%
4	Amy category of staff	-	-
	Total	48	100%

According to table 15, 28 (58.3%) respondents form the majority of the category of staff that would be needed in handling automation to assist users in meeting their information needs effectively, are staff trained in librarianship and ICTs, followed by 12 (25%) respondents representing staff trained in ICTs, only 8 respondents representing 16.9% indicates that staff trained in various profession.

Table 16: Factors militating against the application of ICT in Nigerian university libraries

S/N	Problem encountered	No of respondents	Percentage

1	Inadequate funding	16	33.3%
2	Automation at infancy level	5	10.4%
3	Epileptic power supply	14	29.2%
4	Technical know-how	4	8.3%
5	Lack of search skills	6	12.5%
6	Others	3	6.3%
	Total	48	100%

The most serious problem militating against the application of ICT resources in the Nigerian University Library was inadequate funding by the government and some of the parents organizations of the private owned universities which attracted 16 (33.3%) responses by the respondents. Followed by epileptic power supply which attracted 14 (29.2%) respondents; while lack of search skills attracted 6 (12.5%) responses from the respondents; 5 (10.4%) respondents indicates automation at infancy level and other i.e. 3 (6.3%) of the respondents. The other reason include apathy attitudes of library staff to develop themselves, relapse to computer literacy due to lack of ICT facilities to practice with and lack of importance/recognition attached to the library. Yet other reasons given by respondents include time constraints due to crowded office schedules, financial problem encountered by Library staff, inadequate personnel on the ground to go for training, and inadequate unreliable ICT infrastructure.

Table 17: Suggestions for improvement on ICT reasons in Nigerian university libraries

S/N	Suggestions	No of respondents	Percentage	The
1	Adequate funding	23	47.9%	
2	System upgrade	4	8.3%	
3	Evaluation of Automation facilities	14	29.2%	
4	Adequate training by management of libraries	7	14.6%	
	Total	48	100%	

responses obtained from the respondents as reflected on table 17 regarding the suggestions for improving on the provision of adequate funding which was suggested by 23 respondents representing 47.9%. In the same vein, 14 (29.2%) respondents solicited for the evaluation of automation facilities of the Nigerian University Libraries so that its general information seeking patrons/clientele can benefit enormously from it.

7 (14.6%) respondents opined that adequate training by management of the Nigerian University Libraries should be provided for their staff in order to be able to render effective services to their patrons/clientele without relying heavily on a

specific staff that has an competent skills or knowledge in the operations of the ICT resources 4 respondents representing 8.3% were clamoring for system upgrade to enable them meet up with current trend in this technological age.

Discussion of Findings

As regards to the responses of the respondents, the researchers while conducting this study made do with professional and Para-professional staff of John Harris Library (UNIBEN) and Benson Idahosa University Library (BIU).

The data collected through the Questionnaire administered shows that the respondents that properly filled their questionnaires were 48 out of the 49. Put differently, 48 copies of the Questionnaire were retrieved and analyzed.

In view of the aforementioned, the responses given by the respondents shows that John Harris University Library (UNIBEN) and Benson Idohosa University library (BUI) is automated and the kind of software they apply in computerization/automation process is strategic library Automation Management (SLAM). It was revealed that only three divisions of both university libraries understudy are automated viz. Readers Service Division, Technical Service Division and Collection Development Division.

In section D, regarding the response of the respondents, it can be deduced clearly or in a lucid manner that ICT have impacted enormously Via its effectiveness on the operation and services of the University libraries understudy; which corroborates with the view of patra (2008) which states that: The digital revolution driven by ICT innovation has transformed academic libraries fundamentally, it has impacted on every sphere of academic library. The academic libraries traditional role of information custodian has been reduced to that of being one of many information providers and finally ICT have changed library and information services globally of supporting these view Rana (2009) opines that ICT holds the key to the success of modernizing information services, not only does ICT introduces new ways of information handling, it also bring about change in the structure of information and its communication.

Table 14 shows that the means by which the staff of the university library under study acquiring ICT skill were via staff-in-house training, self-study, formal training and trial and error. It was discovered that the least of staff that acquired this skills are through in house- training of staff; supporting the view Edem (2008) aptly proffers that short computer training and retraining programs should be organized from time to time to assist librarians or library staff who do not have the wherewithal to update their knowledge and computer skills. This will also aid awareness of computer potentials and capacities.

Table 16 reveals the factors militating against the application of ICT in the Nigerian University libraries understudy. In regards to the vivid response of the respondents, it was ascertain by the researcher that poor funding and epileptic power supply is the major factors acting as a drawback or an impediment to the application of ICT in Nigerian University Libraries supporting this findings is the opinion of Ebijuwa (2005) opines that Electricity which must be available for 24 hours of the day is one of the basic problem that Nigeria has with infrastructural facilities. In its view she further stated that its epileptic nature and the constant power cut without notice do not make for the growth of viable ICT programme. In the same vein Edem (2005) proffers solution to the problem that effective and efficient power supply supplemented by standby generator should be provided to check the menace of frequent electric power failure. Also adding to this view Odion and Adetona (2009) also proffers solution to the problem of inadequate fund, that: more generous financial support should be made available to provide the basic infrastructural amenities or facilities.

Other inhibiting factors indicated by the respondent are automation at infancy

level, technical know how, lack of search skills. Inadequate personnel on the ground to go for training, apathy or lackadaisical attitudes of library staff etc.

Summary, Conclusion, Recommendations

The primary aim of this research work is to ascertain the impact of ICT Nigerian University Libraries. The chapter elucidates the summary of findings, recommendations and conclusions. As no research is ever perfect, the limitations of the study are highlighted and suggestions for further research made.

Summary of Findings

Arising from this research are the following the following findings:

1. The female respondents were more than the male respondents.
2. The respondent between the age range of 25-56 year and above, but the respondent between the ages of 36-45 years were highly populated compare to others.
3. Majority of the respondents had OND/NCE/Diploma and ND Certificate.
4. Both University libraries understudy are computerized/automated, and both of them apply Strategic Library Automation Management (SLAM) in their libraries.
5. Only three divisions of the library are computerized/automated, which are readers services division, technical service division and collection development division.
6. The ICT resources mostly used by respondents, were CD-ROM, online database, World Wide Web and the Internet.
7. The major reason attached to the use of ICT resources by the respondent is - storage and retrieval of information.
8. ICT has impacted enormously, base on its effectiveness on the Nigerian University Libraries.
9. The respondents had not been assisted in the area of training and re-training by management.
10. Respondents agreed that Capacity Building (DB) by way of Staff training in librarianship and ICT would go a long way in keeping librarianship profession at the top edge especially in this epoch of globalization.

The factors acting as impediments to the impact of ICT on Nigerian University Libraries were inadequate funding which has given birth to some other problems e.g. automation at infancy level, lack of training facilities, lack of competent search skill on the side of the library staff at both strategic and operational level. And some that are also caused by the government for example epileptic power supply which has become a thorn in the flesh of an average Nigerian organization or establishment which also disrupts or acts as a breakdown to computers. Also interrupted network caused by poor electronic gadgets and so many others that also hinders the positive impact of ICT on Nigerian University Libraries.

Respondents were given opportunities to air their view in regards to the areas in which Nigerian University Libraries need further improvement. Most of the respondents suggested adequate funding of Nigerian University Libraries, some of the respondents also suggested evaluation of automation facilities, system upgrade and adequate training of staff by management of the Nigerian University Libraries. So as to enable them cope with the current trend or the new technological revolution.

Recommendations

Arising from the findings and conclusion are the following recommendations.

- i. More generous financial support should be made available to provide the basic ICT infrastructural facilities,
- ii. Since Information and Communication Technology (ICT) has come to stay, library staff that are not computer literate should take positive steps to remedy their deficiencies so as to flow along with the reforms. By this, library and information services will become ennobled through the acquisition of adequate ICT knowledge/skill and its full application in Nigerian University Libraries or else they will become irrelevant in this era of ICT.
- iii. Effective and efficient power supply supplemented with standby generators should be provided to check the menace of frequent electricity power failure. In the same vein, the government should address the problem of erratic power supply more seriously not through military order but through research and development.
- iv. The assistance of some donor agencies such as Education Trust Fund (ETF) and Open Society Initiative for West Africa must be actively enlisted (OSIWA)
- v. Every division of the Nigerian academic libraries should be automated in order to facilitate and create an avenue for effective services.
- vi. Short computer training and retraining programs should be organized from time-to-time to assist Librarians who do not have knowledge and computer skills. This will also aid awareness of computer potentials and capabilities.
- vii. Orientation programs on the use of computer for information retrieval should be conducted and made compulsory for new entrants into the profession.
- viii. Imported ICT equipments should be tax free.

Conclusion

The inevitable conclusion that the researchers have arrived at in this study is that ICT has fulfilled its promise in academic libraries, there is remarkable rise in the use of ICT, many of the libraries activities are now ICT driven. This has led to the speed on acquisition, processing, storage, retrieval and dissemination operations. ICT has also help to curb the problem of information explosion in this information era.

Limitation of the Study and Suggestions for Further Research

Although conscious efforts have been made to ensure that the data was valid and findings are reliable, nevertheless there could be some errors. These include the use of a sample of two university libraries in Nigeria. The short coming among others in the design and the execution of this research work lies on the scarcity of resources in the form of financial constraints, time constraint and materials needed for the project work. They were not easy to come by.

Furthermore this research does not claim comprehensives, therefore the areas have been suggested as areas for further research to fill whatever gaps this project has left.

- i. The impact of ICT on schools: classroom design and curriculum Delivery.
- ii. Complementing information and communication technologies with traditional librarianship skills for effective library service.

lii A survey of the availability of information and communication technology in academic libraries in Nigeria.

References

Aguolu, C & Aguolu, I. E (2002): *Libraries and Information Management in Nigeria*. Maiduguri: Ed- Linform Services. 267pp.

Ani, O. E., Esin, J.E. & Edem, N. (2005): Adoption of information and Communication Technology (ICT) in Academic Libraries: a strategy for Library networking in Nigeria. *The Electronic Library Journal*, 23 (6), 27-37.

Aniekwu, A.N and Ogbeide, F.N. (2002): Information Technology and Technological Development in Africa. In Yusufu, A.K. (ed) *Journal of Engineering Science and Applications (JESA)*. Faculty of Engineering and Technology, AAU, Ekpoma. 3 (2), 83pp.

Anunobi, C.V. (2005): ICT Availability and use in Nigerian University Libraries. *Global Review of Library and Information Science*.1 (1), 39-51

Bryson, J. (1990): *Effective Library and information Center Management*. England: Gower Publishing. 165pp

Chisenga, J. (1995): The Skills of Information Technology in Zambian Libraries.

African Journal of Library, Archives and Information Science. 5(1)19-24 pp

Cohn, Z. and Lefolli, S. (1995): *Dictionary of Information Technology*. London: Claremont Books. 75pp.

Ebijuwa, A.S. (2005): Information and communication technology in university libraries: the Nigerian experience. *Communicate, Journal Of Library and Information Science*, 7 (1&2).

Ehikhamenor, F.A.(1993): Information Technology and scientific and technological information in Nigeria: revolution and evolution". *Africa Journal Of Library, Archives And Information Science*. 39 (2) 113-123

Eyitayo, S.A. (1998): *Relevance Of The New Information Technologies In Cataloguing*. A paper presented at the Annual Cataloguing and Classification Seminar/Workshop, Ilorin (25th-30th October).

Idowu, A.O. and Mabawonku, I. (1999): Information technology facilities application in some Nigeria Research and University Libraries. *Africa Journal of Library, Archives And Information Science*. 9(1).

27-36.

Jaiyeola, R. (2007): Information and Communication (ICT) as a tool for Chartered Accountants. *The National Accountant*. 46 (1), 48 – 49pp.

Nwalo, K. I. N. (2000): Managing Information for Development in the 21st Century: prospects for African libraries, challenges to the world. *Booklet 8. IFLA Jerusalem*.14p

Nwokedi, V.C. (2007): Impact of Internet Use in Teaching and Research Activities of the Academic Staff of the Faculty of Medical Science. University of Jos. A case Study. *Gateway Library Journal*, 10 (1), 23-33.

Odion , F. and Adetona, C.O. (2009): Information and Communication Technology (ICT) as a tool for effective performance by Academic Librarians in Edo State of Nigeria. *Communicate, Journal of Library and information Science*. 11(1), 27-31

Ojedokun, A. A. (2000): Prospects of Digital Libraries. *African Journal of Library, Archives and Information Science*. 10(1). 13 –21.

Oketunji, I.(2000): Application of information technologies in Nigeria: Problems and Prospects; paper presented at the 10th Biennial Conference of the National Association of Library and Information Science Educators. 7-20

Oketunji, I. (2001): Computer Application to Libraries. *In a Compendium of Papers presented at the 39th National Annual Conference and AGM of the NLA, Owerri*. 2 –14

Patra, B.k.(2008) The Role Of Information and Communication Technology on Management and Services Of Academic Libraries. *Techno India Group Research Journal*, 1(1).

Pillow, A. (2003): Database Electronic Resources
<http://www.libunicletu/science/instruction/glossary.html> Retrieved on the 14th November 2009.

Rana, H.K. (2009): *Impact of Information and Communication Technology on Academic Libraries in Punjab*. Source: <http://www.goarticles.com/cgi-bin/showa/cgi? =1239032> Retrieved 28/08/2009

Ubogu, F. N. (2000): The Paperless Society: Farce or Reality. *African Journal Of Library And, Archives And Information Science*. 10(1), 13 – 21.